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**Qwest**  
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**Elridge A. Stafford**  
Executive Director-Federal Regulatory

August 25, 2000

Mr. Dale Hatfield  
Chief, Office of Engineering and Technology  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W., Room 7-C155  
Washington, D.C. 20554


RE: CFR 47, Section 63.100  
Final Service Disruption Report, Denver, CO  
DNVRCOCWDS0

Dear Mr. Hatfield:

On July 29, 2000, Qwest<sup>1</sup> experienced a Service Outage in Denver, CO. In accordance with the reporting rules, CFR 47, Section 63.100, enclosed is Qwest's Final Service Disruption Report for this outage.

Please contact me if you have questions concerning this report.

Sincerely,

  
Elridge A. Stafford

Attachment

cc: Mr. Robert Kimball  
Mr. Doug Sicker

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<sup>1</sup> On June 30, 2000, U S WEST, Inc., the parent and sole shareholder of U S WEST Communications, Inc., merged with and into Qwest Communications International, Inc. Further, on July 6, 2000, U S WEST Communications, Inc. was renamed Qwest Corporation.

## Final Service Disruption Report

**Reporting Company:** Qwest

**Location of Disruption:** Denver, CO (DNVRCOCWDS0)

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**1. Date and Time of Incident:**

July 29, 2000, at 0624 MDT.

**2. Geographic Area Affected:**

Northwest Denver, CO metropolitan area.

**3. Estimated Number of Customers Affected:**

Approximately 34,542 Qwest customers were affected by the outage.

**4A. Types of Services Affected:**

Interoffice interLATA and intraLATA were affected.

**4B. 911 Service Affected**

911 service was not impacted.

**5. Duration of Outage**

Service was restored July 29, 2000, at 1125 MDT for a total duration of 5 hours 1 minute.

**6. Estimated Number of Blocked Calls:**

There were approximately 45,000 blocked calls.

**7A. Root Cause of the Incident:**

The root cause of the incident was employee error.

A central office technician (COT), while working on a simplex failure on a A-link in the Cottonwood office in Denver, CO, determined that the circuit pack at the D4 Channel bank needed to be replaced. The COT incorrectly optioned the new circuit pack at 64K instead of the appropriate 56K level which resulted in an SS7 isolation.

**7B. Name and Type of Equipment:**

D4 Channel Unit.

**7C. Specific Part of Network Affected:**

Interoffice transport requiring CCS signaling.

**8. Method(s) Used to Restore Service:**

The following steps were taken to restore service:

- ◆ The circuit packs in the D4 Channel Units were re-optioned to the correct settings.

**9. Steps Taken to Prevent Recurrence of Outage:**

The following steps have been or will be taken to prevent recurrence of this problem:

- ◆ Appropriate discussions and additional training have been provided to the technician that incorrectly optioned the circuit packs.

**10A. Applicable Best Practice(s):**

Qwest reviewed Network Reliability: A Report to the Nation, June 1993 and evaluated all recommendations and best practices by focus area. Based on the root cause analysis, the most appropriate focus areas are:

Section B – Signaling Network Systems

Reference 6.1.1 – Root Cause Analysis on CCS Failures

Reference 6.2.1.7 – Labeling SS7 Equipment

Reference 6.2.1.8 – Integration of CCS/SS7 Key Functions and Processes

**10B. Best Practice(s) Used:**

Section B – Signaling Network Systems

Reference 6.1.1 – Root Cause Analysis on CCS Failures

Reference 6.2.1.7 – Labeling SS7 Equipment

Reference 6.2.1.8 – Integration of CCS/SS7 Key Functions and Processes

**10C. Analysis of Effectiveness of Best Practice(s):**

Section B – Signaling Network Systems

Reference 6.1.1 – Root Cause Analysis on CCS Failures

This best practice recommends that root cause analysis be performed on SS7 failures. Qwest has adopted this best practice. Qwest Local Network Operations performs root cause analysis on all major network events. The results of these reports are shared on a weekly conference call to discuss root cause.

Reference 6.2.1.7 – Labeling SS7 Equipment

This best practice recommends that all SS7 equipment be labeled for easy identification. Qwest has adopted this best practice as part of its Local Network Central Office Certification process. The SS7 links were not tagged in this office, but were tagged after restoration of the A-links was completed.

Reference 6.2.1.8 – Integration of CCS/SS7 Key Functions and Processes

This best practice recommends that functions and processes critical to successful operation of the CCS/SS7 network be combined into a single work group. Qwest has

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implemented this best practice. In addition, Qwest Local Network Operations maintains a Network Management Center (NMC) that works closely with the CCS/SS7 group during SS7 failures. The NMC implements network controls where required and facilitates the restoration process.

**Contact Person:**

Elridge Stafford, Executive Director – Federal Regulatory

Qwest

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**FCC INITIAL REPORT**  
**QWEST - Large Scale Abnormal Condition Report (LSACR)**  
**Service Disruption Report**

[ ] 120 MINUTE REPORT ☒ 3 DAY REPORTACR #: CO. 000729.001Date Of Incident: 7/29/00 Time Of Incident: 6:08 AM MDTGeographic Area Directly Affected: DENVER COTTONWOOD, COLORADO  
[Cities, LATA(s), States(s)]CLLI code(s) for affected area: DNVRCDWDSPEstimated Number of Customers Affected: 34,542  
[i.e. Access lines in the switch, LATA(s) or States(s)]Types of Services Affected (e.g. Local, Toll, 800, 911, FAA, etc.): SS7 ISOLATIONDuration of Outage (Hours & Minutes): 5 HOURS 17 MINUTESEstimated Number of Blocked Calls: UNDER INVESTIGATIONApparent Cause of Incident: UNDER INVESTIGATIONMethod Used to Restore Service: UNDER INVESTIGATIONSteps Taken to Prevent Recurrence: UNDER INVESTIGATIONCONTACT PERSON: Kenneth Cartmell-Exec. Dir-Fed Regulatory Ph: 202-429-3136  
Qwest  
1020 19th Street NW Suite 700, Washington, D. C. 20036Tim Mason  
Vice President - NROC  
Ph: (303) 707-5100  
Qwest  
700 W. Mineral, Littleton, CO 80120-or-  
Dave Rygh  
Director - Network Management Center  
Ph: 303-707-5608  
Qwest  
700 W. Mineral, Littleton, CO 80120Date Reported to FCC: 7/31/00Time Reported to FCC: 3:29 PM MDT  
(Include AM/PM, Time Zone)Person Faxing Report: KATHLEEN RHODES

Time Confirmed with FCC: \_\_\_\_\_

Telephone Number: 303-707-6880

FCC Contact Name: \_\_\_\_\_

**PRI FAX: Monitoring Watch Officer (202) 418-2812-Confirm at (202) 632-6975**Secondary FAX: Monitoring Watch Officer (301) 725-2521 - Confirm at (301) 725-2278  
(To be used only at the direction of the Primary Fax Monitoring Watch Officer)

Also FAX to: Qwest Federal Relations Office at (202) 296-5157

Also FAX to: Karen Eccli/Jane Quigley (303) 707-2229

Also FAX to: Glenda Weibel (206) 345-2129

Also FAX to: Bev Sharpe (303) 694-1719